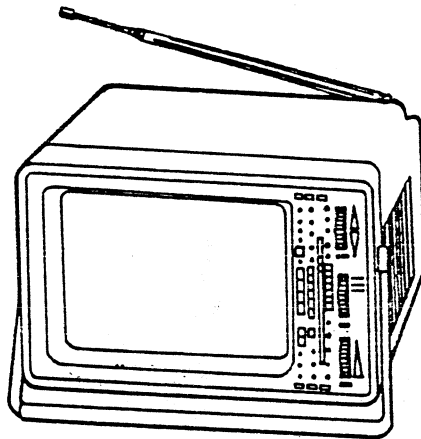
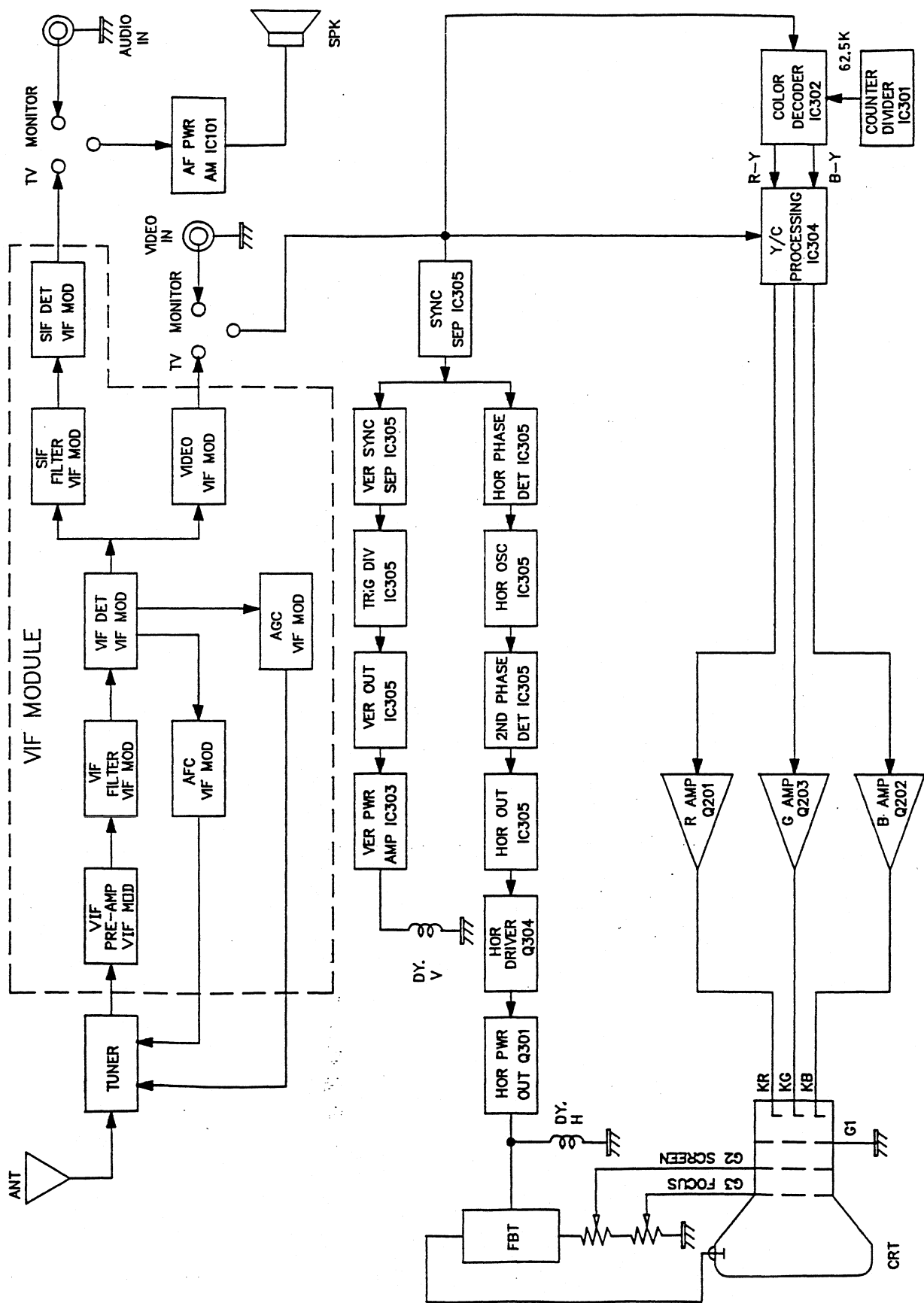


Service Manual

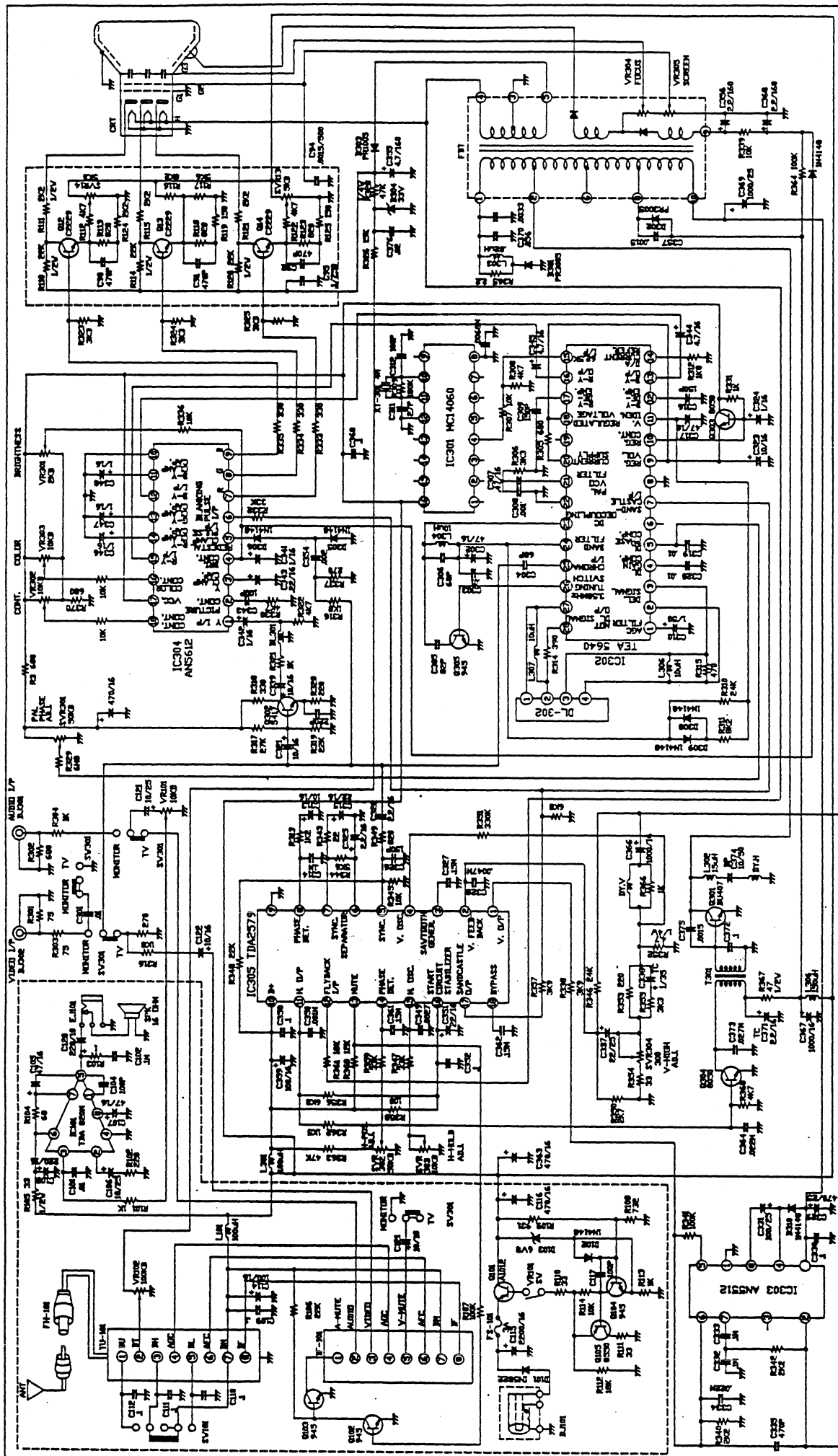
6" COLOR
PORTABLE TV/MONITOR
MODEL NO: CTV-2116



BLOCK DIAGRAM



ACN-7101BF



SUBFIX	REV	RECD	ACTION ELECTRONICS CO., LTD.
AA	1990/5/5		億電電子股份有限公司
AB	1991/5/3		TITLE: MCH-7101B SCHEMATIC DIAGRAM
AC			
AD			
AE			

DESIGN	CHECK	APPROVED
P. L. Leu		

VIF DET. MODULE



ACTION ELECTRONICS CO., LTD
TV ELECTRICAL SPECIFICATION

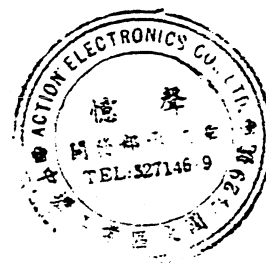
MODEL NO: ACN-7101 BF (FTZ) OUTPUT: 50mW DATE: 79/10/04
SUPPLY VOLTAGE : DC 13.5 V LOAD : 16 ohm R&D: 施存裕
GERERAL INFORMATION : TV 75 OHM INPUT ANT. SIFE VOLTAGE 0 dB =1uV

PAGE:1

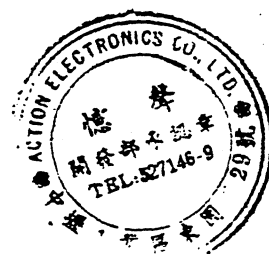
DESCRIPTION		UNIT	LIMIT	NOMINAL	NO.1	NO.2	NO.3	NO.4	NO.5	NO.6
VL BAND										
TUNING RANGE	HIGH	MHZ	112.25	115.25						
	LOW	MHZ	48.25	45.25						
MAX/USABLE SENS	CH - 2	dB	32/46	26 /40	/	/	/	/	/	/
	CH - S2	dB	32/46	26 /40	/	/	/	/	/	/
	CH - M2	dB	32/46	26 /40	/	/	/	/	/	/
IF REJ.	CH - S2	dB	40	50						
IMAGE REJ.	CH - S2	dB	40	55						
DIAL CALIB.	CH - 2	MHZ	± 7							
	CH - S2	MHZ	± 7							
	CH - M2	MHZ	± 7							
VH BAND										
TUNING RANGE	HIGH	MHZ	294.25	300.25						
	LOW	MHZ	119.25	92.25						
MAX/USABLE SENS	CH - M3	dB	32/46	26 /40	/	/	/	/	/	/
	CH - E12	dB	32/46	26 /40	/	/	/	/	/	/
	CH - U10	dB	32/46	26 /40	/	/	/	/	/	/
IF REJ.	CH - E12	dB	50	60						
IMAGE REJ.	CH - E12	dB	46	55						
DIAL CALIB.	CH - M3	MHZ	± 7							
	CH - E12	MHZ	± 7							
	CH - U10	MHZ	± 7							



DESCRIPTION		UNIT	LIMIT	NOMINAL	NO.1	NO.2	NO.3	NO.4	NO.5	NO.6
UHF BAND										
TUNING RANGE	HIGH	MHZ	855.25	860.25						
	LOW	MHZ	471.25	435.25						
MAX./USABLE SENS	CH - 21	dB	36/52	30 / 46	/	/	/	/	/	/
	CH - 30	dB	36/52	30 / 46	/	/	/	/	/	/
	CH - 40	dB	36/52	30 / 46	/	/	/	/	/	/
	CH - 50	dB	36/52	30 / 46	/	/	/	/	/	/
	CH - 60	dB	36/52	30 / 46	/	/	/	/	/	/
IF REJ.	CH - 40	dB	40	50						
IMAGE REJ.	CH - 40	dB	30	40						
DIAL CALIB.	CH - 21	CH	± 4							
	CH - 30	CH	± 4							
	CH - 40	CH	± 4							
	CH - 50	CH	± 4							
	CH - 60	CH	± 4							
ADJ. PIX. ATT.		dB	20	30						
ADJ. SND. ATT.		dB	20	30						
SELF. SND. ATT.		dB	20±6							
CONTRAST RANGE		dB	4	6						
SOUND										
MAX. OUTPUT		mW	500	700						
THD. OUTPUT 10 %		mW	400	550						
REF. THD		%	5	3						
S / N		dB	30	35						
AM SUPP.		dB	25	30						
MIN. HUM		mV	30	15						
RESPONSE FH 6 KHZ FL 125 HZ		dB	-3±12	-3±3						
		dB	-3±6	-3±3						
SIF. FREQ. ERROR		KHZ	±100	0						
LIMIT SENS.		dB	80	70						



DESCRIPTION	UNIT	LIMIT	NOMINAL	NO.1	NO.2	NO.3	NO.4	NO.5	NO.6
PICTURE									
HOR. FREQ.	HZ	± 500	0						
HOR. PULL-IN	+	HZ	500	750					
	-	HZ	500	750					
LINEARITY	VERT.	%	15	10					
	HOR.	%	25	15					
PINCUSHION	DIST.	%	2	1					
BARREL	DIST.	%	2	1					
KEYSTANE	DIST.	%	2	1					
V / H	OVERSCANNING	%	12 / 12	8 / 8					
LUMINANCE	MAX	lux	170	180					
	MIN	lux	0	10					
VA TEST									
H. V.	MAX	KV	10 ± 1	10					
H. V.	MIN	KV	8 ± 1	8					
REG. VOLTAGE		V	$11 \pm .5$	11					
DELAY AGC. VOLTAGE		V	4 ± 1	4					
REG. RIPPLE VOLTAGE		mV	30	15					
DC CONSUMPTION		W	25	22					
AC CONSUMPTION		W							



ALIGNMENT PROCEDURE

REGULATOR ADJUSTMENT

1. CONNECT TV UNIT TO DC 12V-14V POWER SUPPLY & TEST PATTERN GENERATOR.
2. ADJUST HORIZONTAL HOLD SVR303 UNTIL THE PICTURE HOLD IN SYNC.
3. VERTICAL HIGHTNESS ALIGNMENT
ADJUST THE VERTICAL HIGHTNESS SVR304 ENABLE THE CIRCLE OF PICTURE APPROACH TO CIRCLE.
4. HORIZONTAL POSITION ALIGNMENT
ADJUST HORIZONTAL POSITION SVR302. LET THE SQUARE SIGNAL IN THE CENTER OF THE SCREEN.
5. RF AGC ALIGNMENT
ADJUST VIF MODULE AGC CONTROL VR1 AT INPUT SIGNAL INTENSITY 50dB, THE SCREEN COULD LOOKING CLEAR AND 80dB THE SCREEN DON'T INFLECT.
6. WHITE BALANCE ALIGNMENT
ADJUST THE SVR13, SVR14, AT CENTER POSITION. ADJUST SCREEN VR305, LET THE SCREEN WILL BE LITTLE BRIGHTNESS. ADJUST SVR13 LET THE SCREEN TO BE YELLOW, AND THEN ADJUST SVR14 LET THE SCREEN APPROACH TO WHITE.
7. FOCUS ADJUSTMENT
ADJUST FOCUS VR304, LET THE STRIP LINE ON THE SCREEN TO BE CLEAR.
8. SET PATTERN GEN. TO COLOR BAR AND ADJUST SVR301 TO MAKE COLOR BAR ON SCREEN CORRECTLY & FREE FROM NOISE.

GENERAL ALIGNMENT INSTRUCTIONS

1. VIDEO IF ALIGNMENT

TEST EQUIPMENT CONNECTION (SEE FIGURE)

OSCILLOSCOPE: CONNECT TO 1) VIF MOD. PIN3

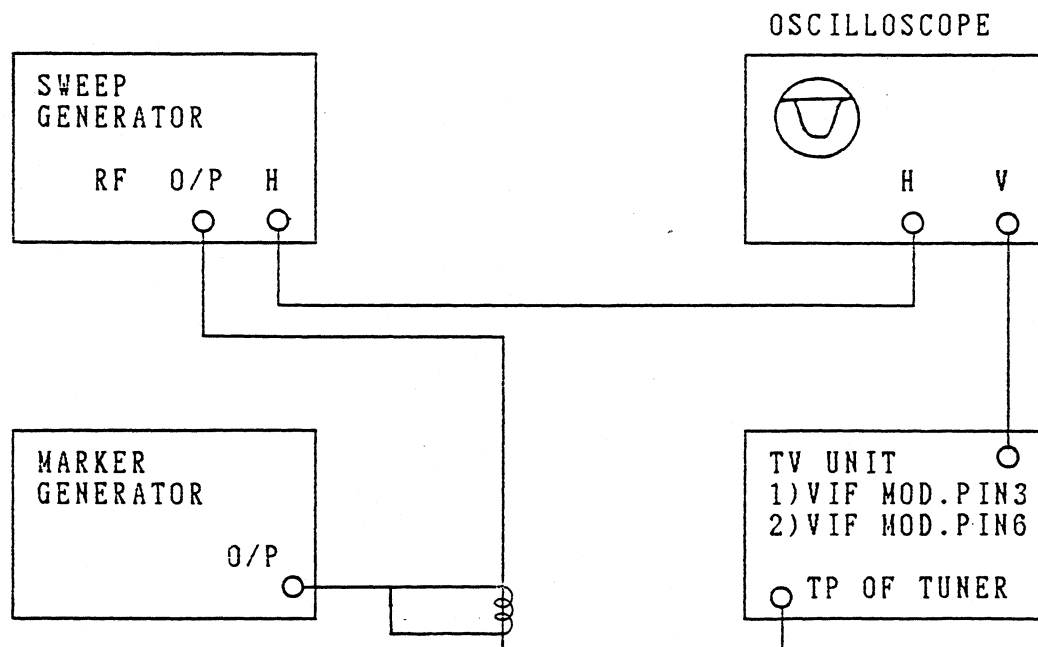
2) VIF MOD. PIN6

SWEEP GENERATOR: CONNECT THROUGH A MATCHING PAD TO TEST POINT (T.P) OF THE TUNER.

MARKER GENERATOR: COUPLE LOOSELY TO THE OUTPUT CABLE OF SWEEP GENERATOR.

DC SUPPLY: ADD DC +12V AT DC JACK.

ADJUST SWEEP GENERATOR TO LOWEST SIGNAL LEVEL CONSISTENT WITH USABLE			
STEP	SWEEP FREQUENCY	MARKER FREQUENCY	REMARK
1) ADJUST VIF MOD. T2 FOR MARKER POINT MAXIMUM.	30-50 MHZ FOR NTSC (45-65MHZ FOR JAPAN). 25-45MHZ FOR CCIR.	SYSTEM B,G,H, 36.7MHZ SYSTEM I 37.3 MHZ, SYSTEM M,N 44MHZ (57MHZ FOR JAPAN) (34.7MHZ FOR AUSTRARIA SYSTEM)	PARENTHESIS FOR EXCE-PTION.
2) ADJUST VIF MOD. T3 FOR MARKER POINT CENTER	30-50 MHZ FOR NTSC (45-65MHZ FOR JAPAN). 25-45MHZ FOR CCIR.	SYSTEM B,C,G,H, 36.7MHZ SYSTEM I 37.3 MHZ, SYSTEM M,N 44MHZ (57MHZ FOR JAPAN) (34.7MHZ FOR AUSTRARIA SYSTEM)	IN THE PARENTHESIS FOR AFC CORRECTION



VIDEO IF ALIGNMENT CONNECTING FIGURE

2. SOUND IF ALIGNMENT

TEST EQUIPMENT CONNECTION

SIGNAL GENERATOR: CONNECT TO TEST POINT(T.P) OF THE TUNER THROUGH A MATCHING PAD.

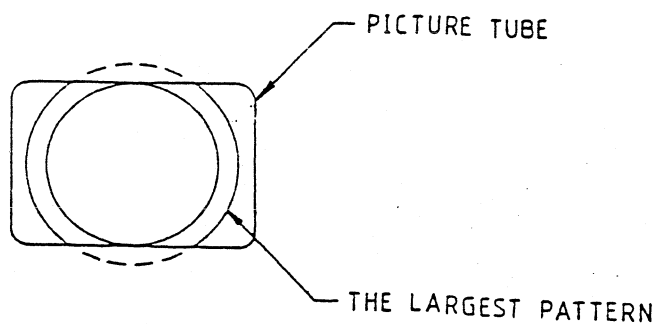
OSCILLOSCOPE: CONNECT TO THE VIF MOD. PIN2.

ALIGNMENT PROCEDURE

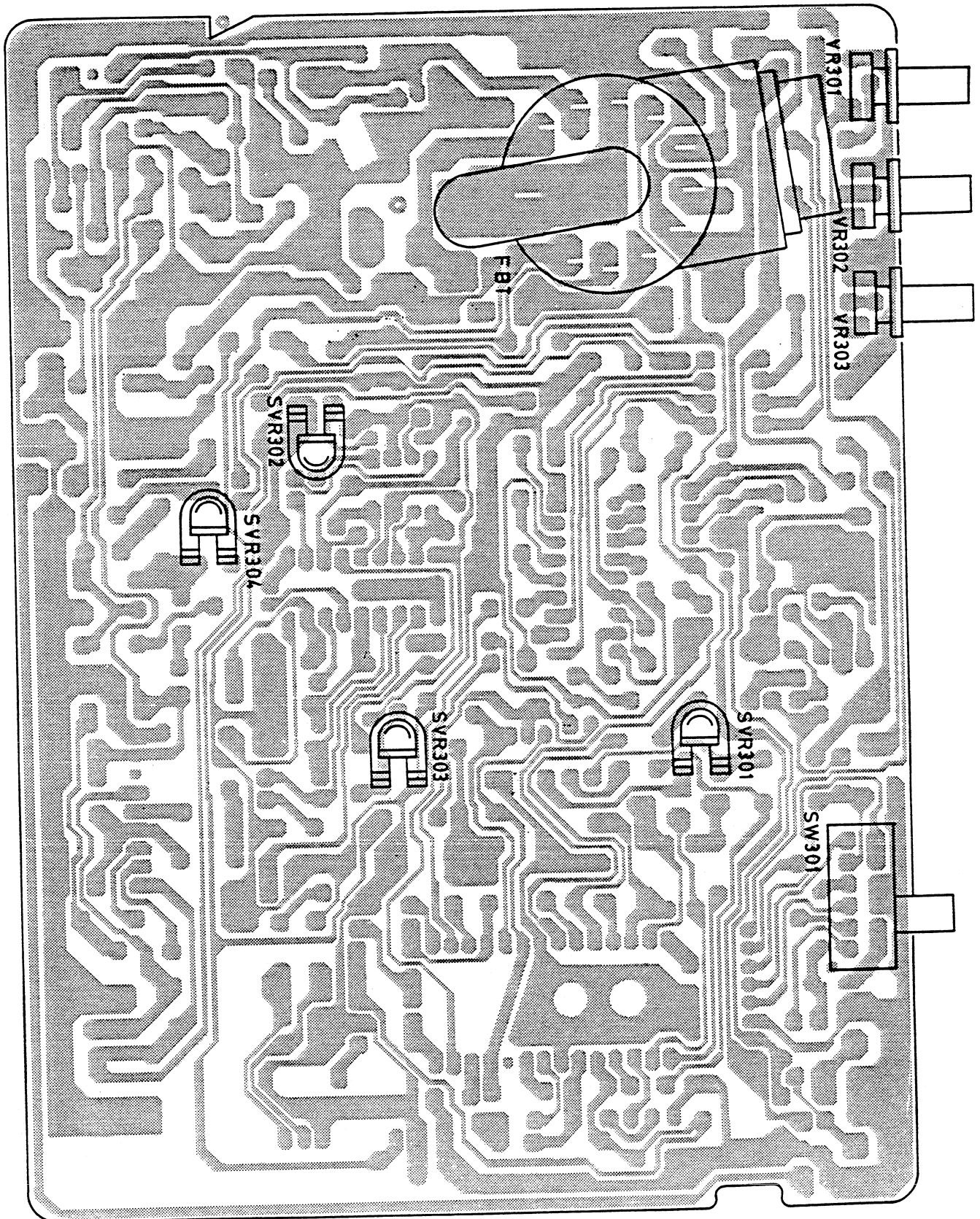
STEP	GENERATOR	SCOPE	ADJUST	REMARKS
ADJUST VIF MOD. T1	SYSTEM B,G,H 33.4MHZ, SYSTEM M,N 41.25MHZ, SYSTEM I 33.5MHZ SYSTEM D,K, 32.4MHZ @1KHZ FM MOD DEVIATION 25KHZ 80DB OUTPUT.	CONNECT TO THE VIF MOD. PIN2	T1	ADJUST T1 SO THE SIGNAL OF 1 KHZ ON SCOPE TO BE MAX.

VERTICAL DEFLECTION ALIGNMENT

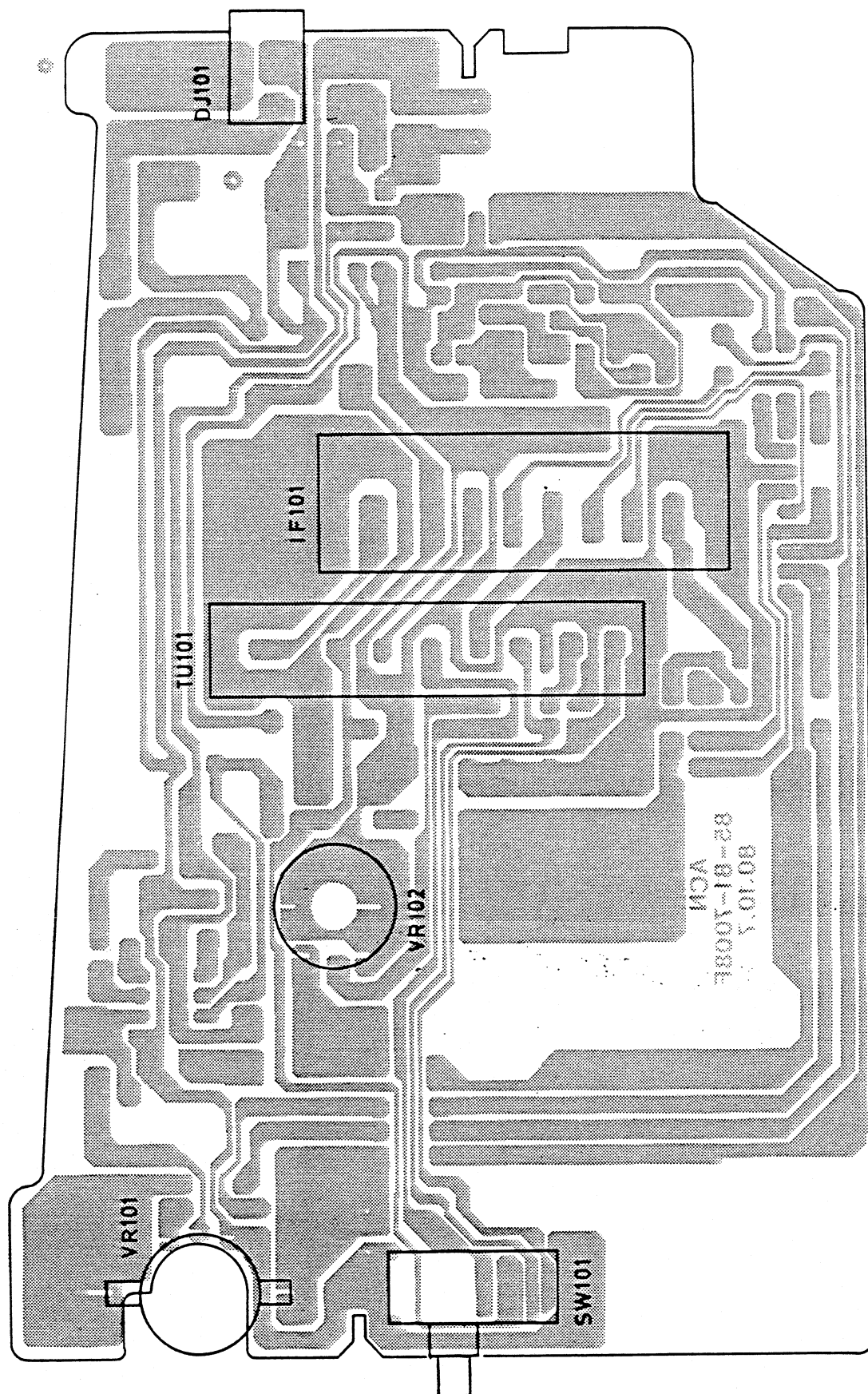
- (1) TUNE THE RECEIVER IN A TEST PATTERN.
- (2) ADJUST V-SIZE CONTROL SV304 TO MAKE
THE INSIDE OF THE LARGEST CIRCLE OF TEST PATTERN REACHES NEAR ROUND
PATTERN. (SEE THE FIGURE)



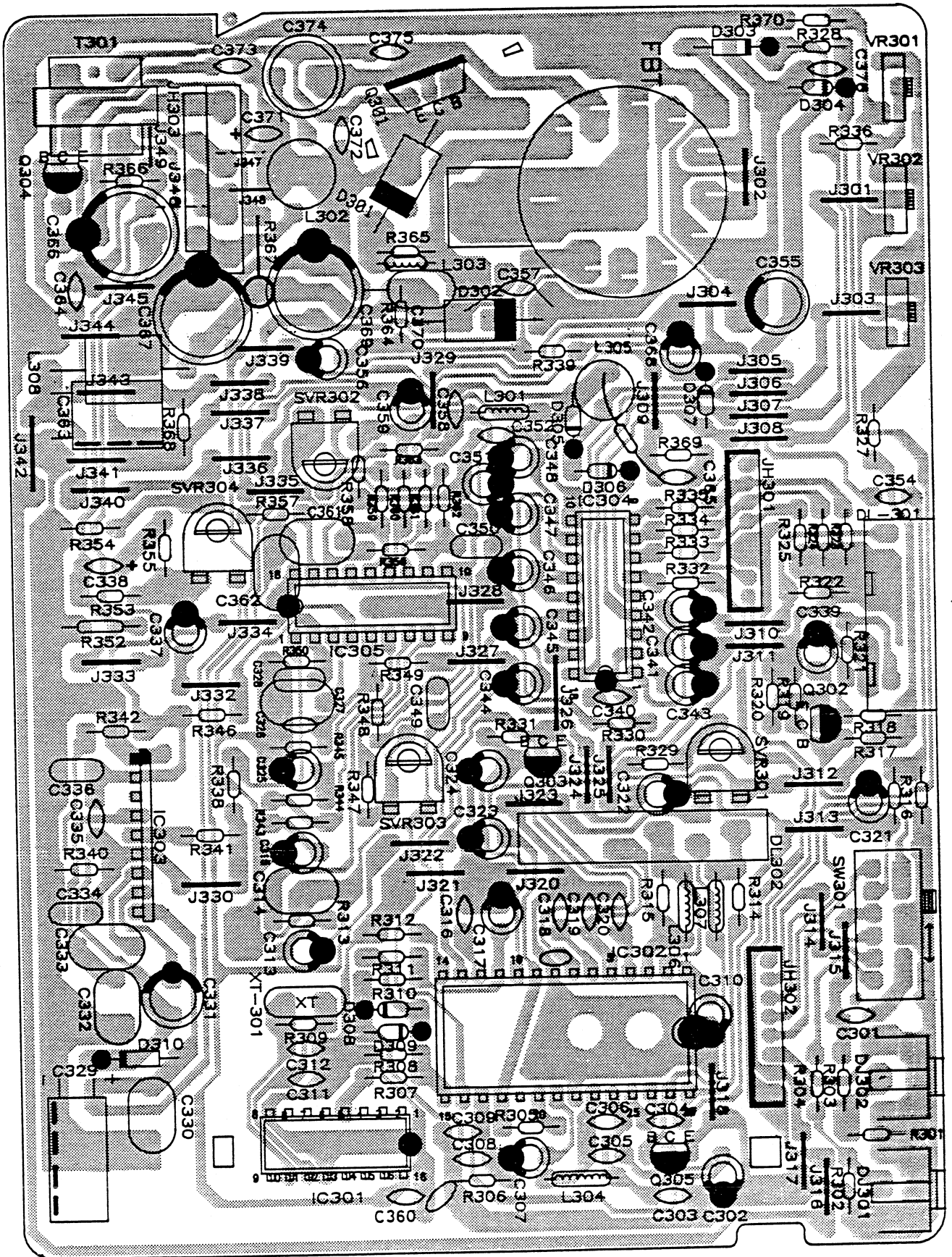
CHASSIS ALIGNMENT POINTS

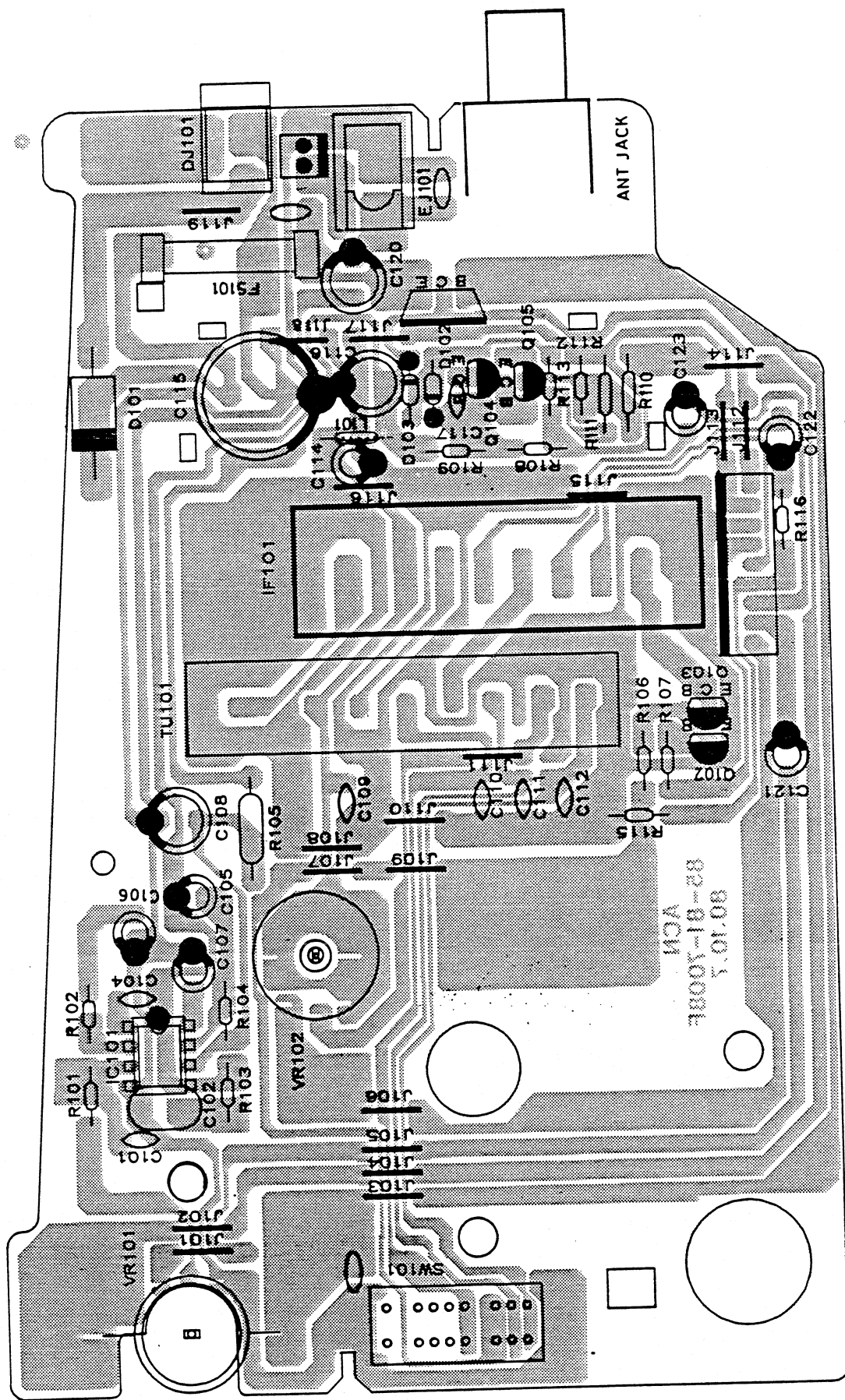


CHASSIS ALIGNMENT POINTS

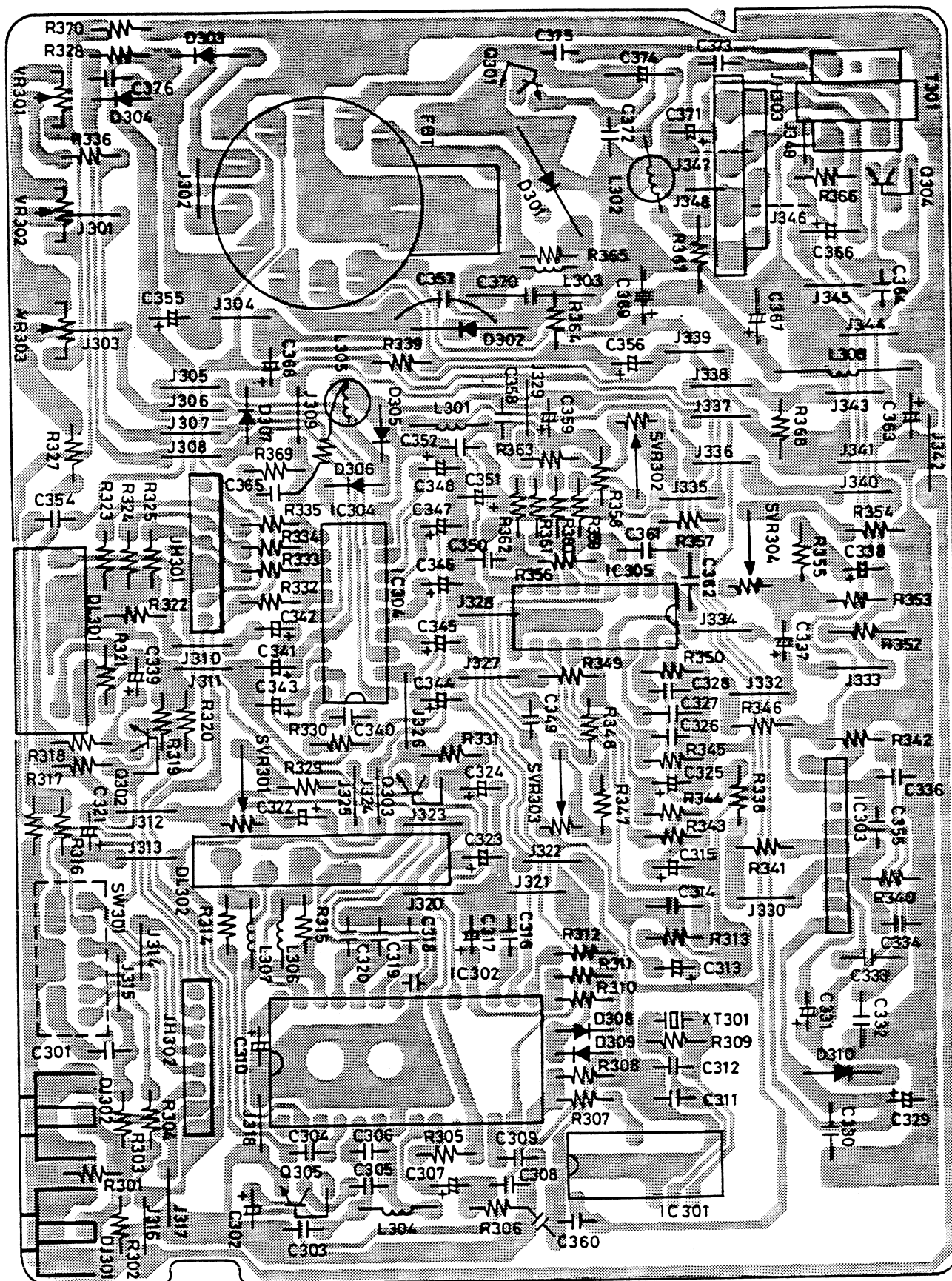


MAIN PRINTED CIRCUIT BOARD (TOP VIEW)

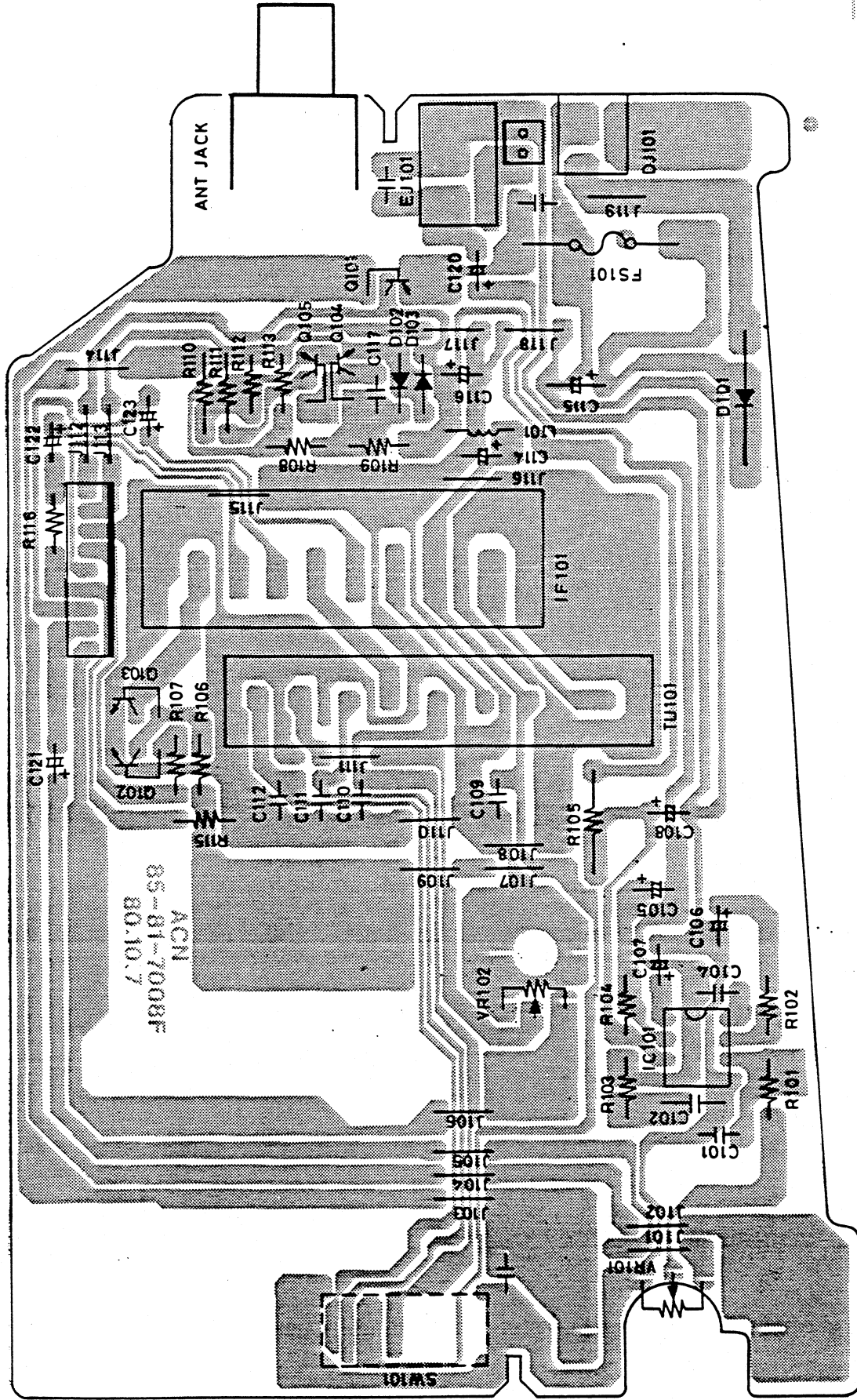




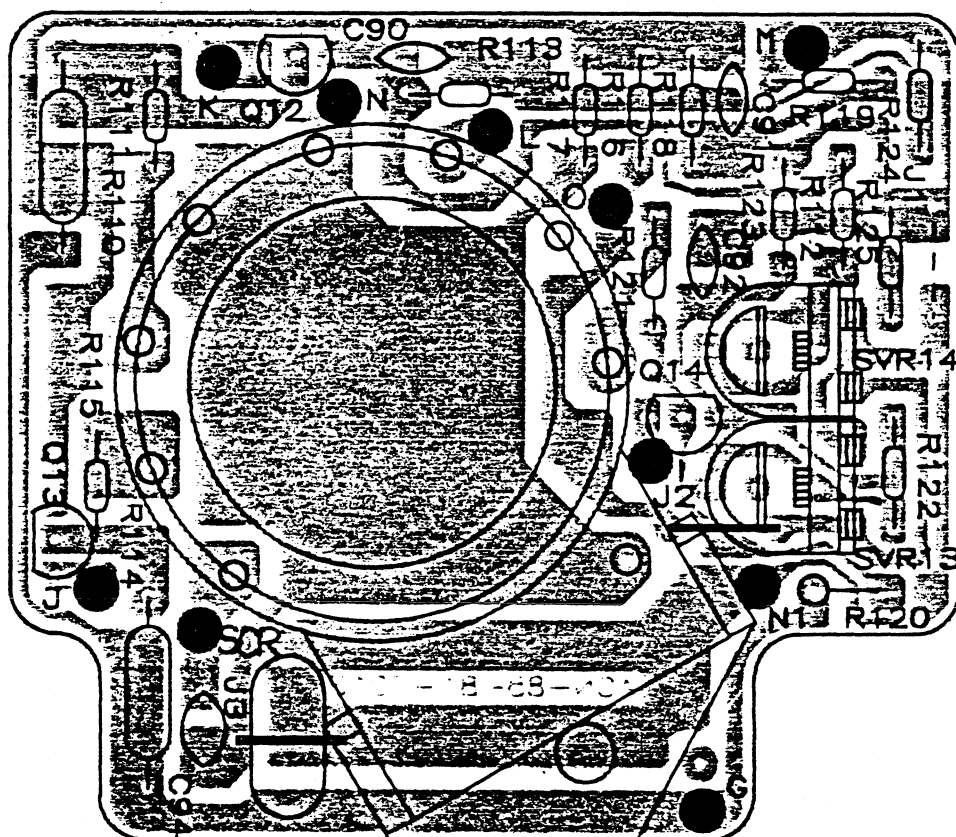
MAIN PRINTED CIRCUIT BOARD (BOTTOM VIEW)

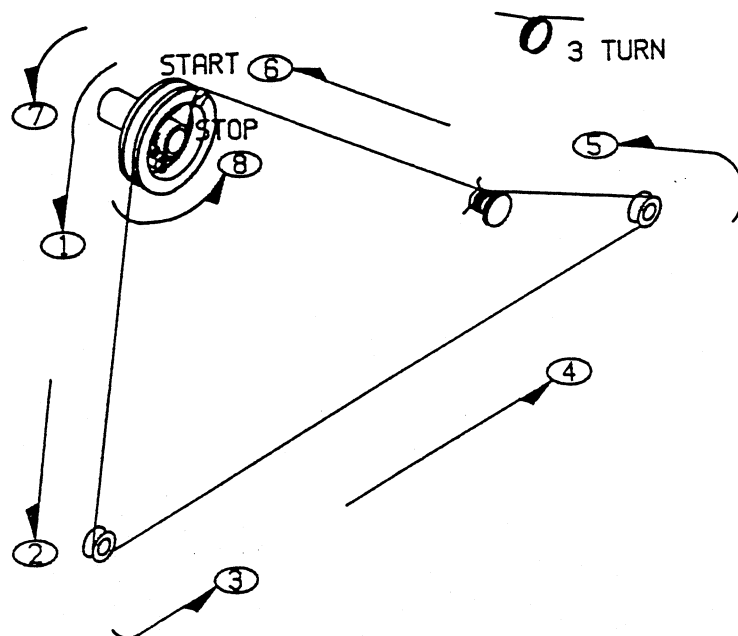


POWER PRINTED CIRCUIT BOARD (BOTTOM VIEW)



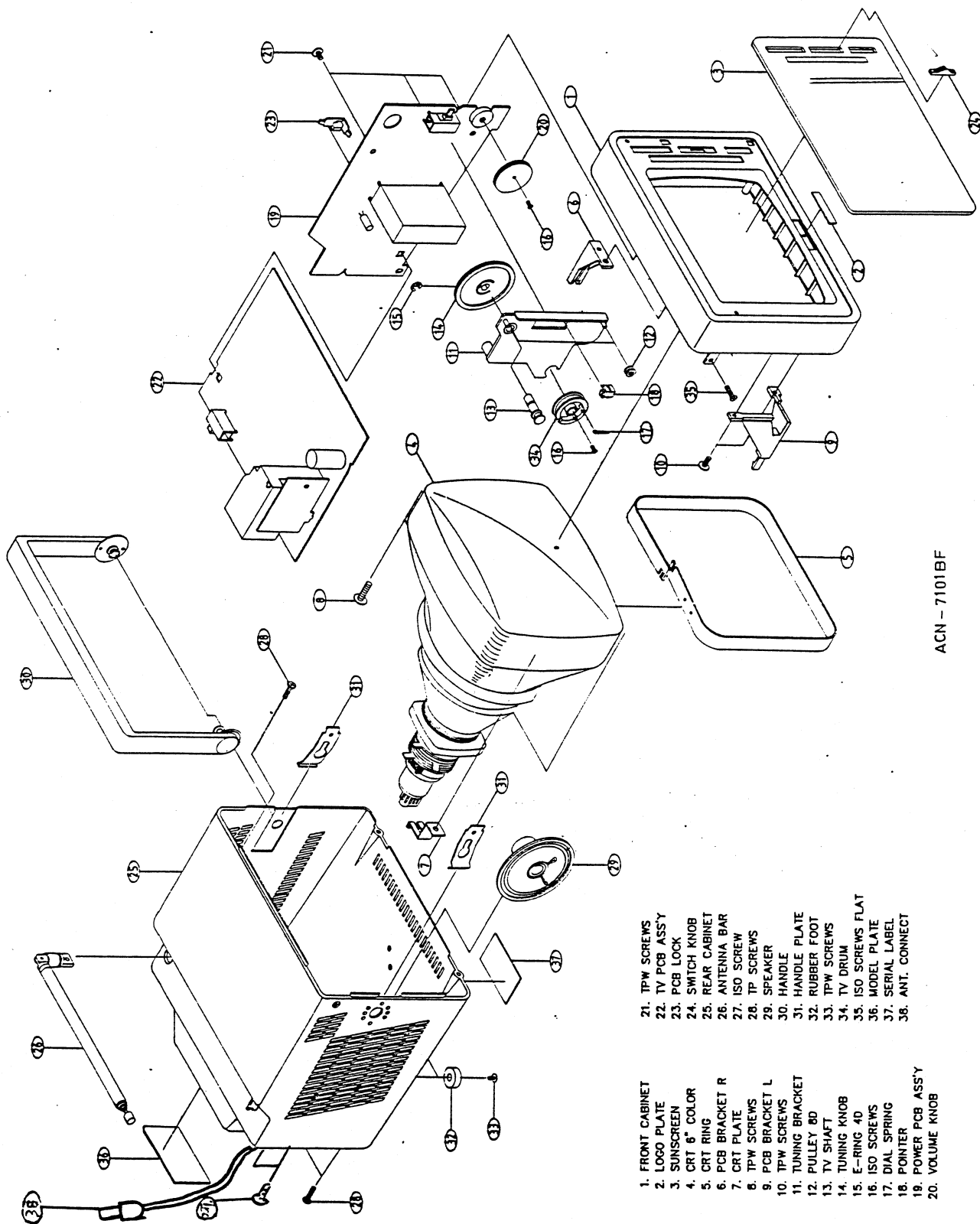
ACN - 7101 BF





DIAL VIEW

EXPLODED VIEW



ACN - 7101BF